



SCARBOROUGH

SPA W.

G. TONSTALL



1670







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Petit Esq^r

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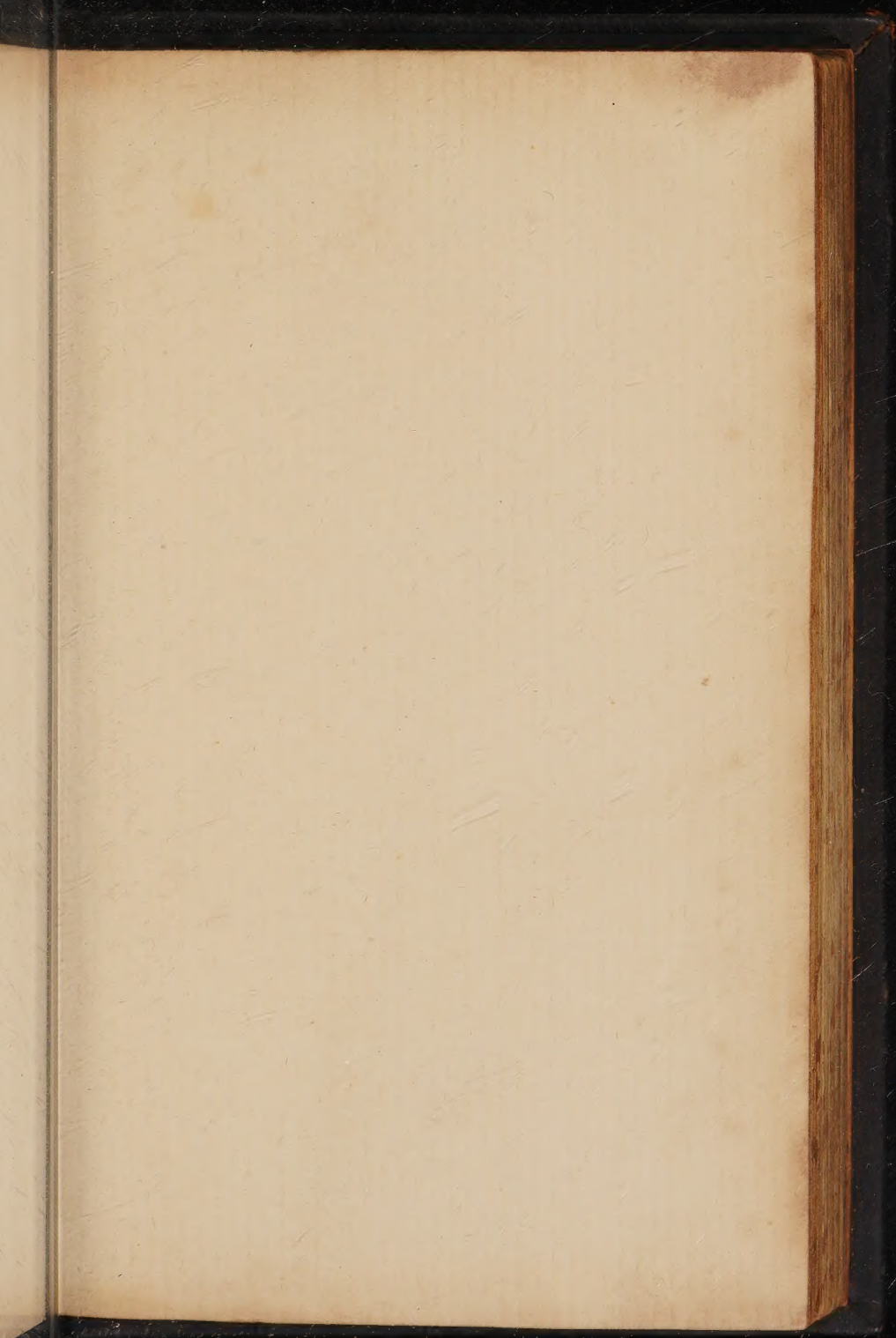
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SCARBROUGH

S^{W. MET} P A W
SOCIETY OF LONDON
SPAGYRICALLY
ANATOMIZED.

BY

Geo. Tonstall, Doctor of Physick.

L O N D O N,

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PREFACE.

Nulla rosa nascitur sine spinis.

DOctor Witty in his Epistle to the Reader complains, that Mr. Simpson by giving him the trouble of answering his Book, hath interrupted his design of a Latine Copy upon the subject of this Spaw, which he thought should have seen the light this year. I would not willingly hinder any good work; let this little there-

Preface.

fore that I have writ, but serve
only as an Appendix to his third
Volume, and I shall clothe it in
like fashion: far be it from me
to espouse the quarrel of either
of them; I profess my self
friend to both; for if I should
not walk uniformly betwixt Dr
Witty's Library, and Mr
Simpson's Laboratory, I might
suspect my self a lame Physician:
Hippocrates and Helmont
I declare are the two great lights
that rule in my Hemisphere
Galen's method of Physick may
justly be named rational so far
as he writes after the old manner
his Masters Copy, I dare not
speak further for him.

Preface.

I hope in this Tract my writing is so candid, that it may be observ'd what I have said is not ad personam, but ad rem. And that I have not concern'd my self in any word which Dr. Witty has been pleas'd to say in his two Books, but only what was necessary to take notice of me defendendo.

It is but one Position that I have affirm'd upon the whole subject; if it be daubed up with untemper'd Mortar, let who will pull it down; but if its foundation be built upon mechanical demonstration, it must stand firmer than Hercules Pillar: by the Process that I have taken, the

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material principles which I assert to be in this Spaw are presented to our senses, these are infallible judges (positis omnibus requisitis) of their objects.

Dr. Witty's failure was, in that he left off where he should have begun: after he had observ'd what is most conspicuous about the Spaw, and tryed that the Gall tinctured the water of a dark purple colour, contents himself with fair probabilities for affirming his five principles, and then, pag. 15. leaves it to others to try Experiments, and make what new discoveries they can.

What

Preface.

What unexpected things hath Anatomy discovered in the body of man these late years ? to derogate a little from the honour of these happy improvements of knowledge, were to speak against the light, and to bark against the Moon : yet why must the usefulness of this noble Art be confined to the Animal Kingdom only ? The grounds of Anatomy in the vegetable and mineral Kingdom, laid down by Tachenius, doth neerly conduce to the discovery of the Nature, Cause, and Cure of diseases, if I know any thing. The little dissertation that I have made of
Scar-

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Scarborough's Diana, gives the cause why one crys, great is D. of S. and another at the same time decrys it as much: the general account for this confused noise is, because as the liquor is commendable, so the dregs are insufferable: the Essence of it fit for the Cup of a Prince, the caput mortuum, which is Sand and Clay, fit for nothing but the Brick-layers Trowel. Hence it doth follow, that those who are weak in their digestive faculties, and strong in their distributive, these may find good by drinking this Water, and no harm by the sordid feces,
due

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due care being taken: but those who are weak in both, will experience the contrary. To all those that have a petrifying character seminated in them, I say of Scarbrough water, Procul Ite, cito abite, nunquam redite.

SCAR-



SCARBROUGH

S P A W

SPAGYRICALLY

A N A T O M I Z E D.

BEfore I enter into this Discourse, I am necessitated to remove an Objection, lest I stumble on the Threshold : Says my honoured Patient, Last Year you perswaded me, that *Scarborough* Water was to be preferred before *Knaishbrough* ; this Year you are of a contrary opinion, and there-

therefore I know not how to trust you. I answer, first *excusively*, you may note hereby, that I am not *pertinacious*; *conviction* of an *error* will work in me *conversion* to the *truth*: Again, I did commend to you no worse thing than that which I took my self; 'twere to be wished that all Physicians were bound with this Girdle. Secondly, *directly*, for your particular trouble, *Gravel*, and *Stone in the Kidneys*, I did prefer the *Nitre at Scarbrough* before the *Vitriol of Knaisbrough*: *Appello Coronam*, if that be not a more noble principle than this; yet must it be understood only *cæteris paribus*. Here my mistake was incurable, until I got opportunity to sift *Scarbrough Water* in the Fire, the best *Microscope* could not have shown me what lay in the bowels of it, only *spagyrick Anatomy* made the Dirt appear to
open

open view. For satisfaction to others, who may censure my *wandering* from *Knaisbrough* to rise from *wavering* in opinion, take this plain Narrative.

Anno Domini 1666. the famous fortunate Chyrurgeon Mr. *Thomas Holiard* of *London* (may this man be blessed in his deed) cut me for the Stone, which weighed four Ounces and a half; Six weeks after, I was able to take Journey; the Doctor there (my friend) told me his doubt, that *Vitrioline* Waters were too sharp for me to drink, because of my green wound so lately healed: notwithstanding I resolv'd for *Knaisbrough*, remembering Mr. *Stones* case which his Father related to me long since, which was this; after his Son was cut, a large Stone taken out of his Bladder, the wound did not perfectly heal, (notwithstanding he had all the help that

Lon-

London could afford) for about
 three Months time, at last Sir *Theod.*
Mayrne did advise him to *Knais-*
brough Water, he had not drunk it
 fifteen days till he was perfectly
 healed; for which great Cure done
 by it, he did frequent that *Spaw*
 for many years after: this Water
 I mixed with white Wine, which
 brought away by Urine abundance
 of mucous matter. *Helmont* the
 Prince of Reason sets down the
 cause hereof in these words; *ubi*
custodes malè se habent, continuo plo-
rant partem proprii alimenti quod
sibi assimilare debebat: I was glad
 to see that this *Spaw* cleansed the
 Bladder from that glutenous stuff,
 which (if let alone) would un-
 doubtedly have laid a foundation
 for another Stone. Sandy Gravel
 (which few or none are exempted
 from) falling amongst it, and mix-
 ing with it, must in continuance
 gather

gather to a hard substance, too great to pass away. I wish all those that shall receive like mercy with me, would use the like means to prevent a relapse of that formidable Disease the Stone.

Anno Dom. 1667. I returned thither again, the season proved wet, during which time, the *spaw* proved very weak of the mineral, this discouraged me from drinking much of it: I then blamed the great Ditch about the Fountain, as the cause of impoverishing the *spaw* of its principle, for I judge it was as rational to pare an Apple, and to peel the Bark off a Tree, and hereby not indemnifie them, as to cut away the surface of the earth about a mineral Fountain; standing water abiding all Winter in these deep Trenches, by sinking down through the softened earth, makes passage into the cur-

rent of the *Spaw*; then every
showre of Rain in the Summer will
find the same crevices and cliffs to
descend into it: If this may suffice
to get this fault mended, I shall be
glad.

Anno 1668. being mostly con-
cern'd to look well to my self
gainst the threatnings of my former
distemper, I visited *Scarbro'*
during mine abode there.

First, I took notice what Doct^r
Witty says, pag. 151. that after
had exhaled the water from the bottom
of the minerals, it would not unite
with other waters, but lie all at the bot-
tom undissolved. By this trial
his, I was certain that in that bot-
tom of Minerals there must be other
things containd than his 4 or 5 prin-
ciples; for *Allom*, *Nitre*, *Salt*, and *Witriol*
of *Iron*, are amicable to water
and without any force dissolvable
it, neither may it be supposed that

the fire in exhaling the Water can alter the texture of Salts, so as to hinder their dissolution; for the more Salts are calcined, the more speedily do they imbibe the Water, as thirsting for it, as Ice doth, therefore easily melt in Water, because it proceeded from it, for the same reason Salts must do so likewise. If any one doubt of this, let him try the Lord *Blay's* Experiment, that learned Frenchman, *viz.* calcine Sea-Salt, deliquiate it, then distill all that will come over, repeat this process, and you will find that all the Salt is turned into Water, as devoid of all saltness, as is distilled Rain Water.

Next thing I observed was these words of his, pag. 13. *Nor can the principles be separated further than I have already expressed, namely, by putting Gall to the Water, notwithstanding many ingenious Gentlemen*

have endeavoured it : I wish that
 he means had applied their wits a-
 bout the usefulness of Experiment-
 al Philosophy , as the Honoura-
 ble *Boyle* has done, and then their
 endeavours would have succeeded
 here, and to higher purposes than
 the separating the principles of
Scarborough Spaw; where the diffi-
 culty lay that obstructed the separa-
 ration, I cannot apprehend, for *fire*
 alone is an instrument sufficient to
 effect it. This *substance* (if I may
 so call it) being as subtile as the
 light, must penetrate through the
 centre of every pore of the mixed
 Water, and because of its property
 to ascend upward, it doth incessant-
 ly disquiet the lodge of heterogeneous
 during this restless Motion , like
 things do occur with like, and their
 Nature is to unite: after this manner
 (as I conceive) it comes to pass
 that *ignis segregat heterogenea*, com-
 gregat

gregat homogenea : by no other artifice did I extract out of the *Spaw* Water a pure *nitroaluminous Salt*, and a large quantity of *feces* apart, both which I then shewed to the Honourable Lord *Faulconbridge*, who can remember what I said then to his Lordship of it. At this time I could not be certain but that much of the Sand which settled to the bottom in the Preparation, came through the carelesness of the Porter that brought me the Water, and therefore I could not come to a positive determination by this Experiment; only I wrote to Mr. *Simpson*, wishing him to forbear publishing any thing concerning *Scarborough Spaw*, till he had spoke with me, because I had made a tryal what was contained in it; his answer was, my advice came too late, for his Book was in the Press, so far was I from having a hand in

the framing his Book, as Dr. Witt was made to believe by the report of others.

This Year 1669. I returned thither, and though I dropt *Oleum salis* tinctured with Gold in every other Glass, hoping thereby to cleanse off the *sordes* of the *Spaw* yet after a fortnights drinking, it gave me a fit of the Stone, which from the time Mr. *Holiard* cured me, I had not felt before. I brought the Water home with me, that I might be sure that nothing extraneous to the *Spaw* might interrupt a *critical Analysis* thereof; the product confirmed my first Experiment, which I made at *Scarborough*. all the materials that can be found in it, are three, first *Ramen* of Stone, secondly a *Nitroalum*inous Salt, and thirdly, a *gleeb* of *Allom*: their proportions are thus of the *Stone-powder*, one Ounce

an

and three Drams; of the *Nitroaluminous Salt*, one Ounce and six Drams; of the *Blew-Clay*, which is the gleebe of *Allom*, three Drams; the *active principles*, and the *caput mortuum* are equal; so that if Dr. Witty's tryal be true, that five Quarts of Water give one Ounce of the body of Mineral (as he calls it) you take half an Ounce of Stone and Clay into your Bowels, every such quantity you drink.

Here you see a cause (as I observed before) why this Body of Minerals would not dissolve in Water, namely, the Stone and Clay by the heat of the Fire (while he exhal'd the Water dry from them) become more compacted together with the Salts, than when they were in the Fountain; whereas when these Salts are separated from their dross, they melt as easily as Snow in Water.

You will say, how comes it about, that there is so much Filth in *Scarborough* Water, as you speak of? For answer, take notice, *Dr. Witt* tells you, that the *spaw*, which is a quick Spring, cometh out at the foot of an exceeding high Clift, all the Stone and Earth that maketh up this Mountain is big belly'd with *Nitre*, *Allom-Stone* here and there mingled in it; after the Spring has run through this high Hill, the *spaw* is brought forth, which is fair and clear to look to; I cannot but compare it to an Harlot, of whom it is said, She eateth and wipeth her mouth, and saith, I have done no wickedness. This hungry *esurine* Water, after she has devoured Stone in a large quantity, as if that were not sufficient for to grate her Teeth upon, she hath swallowed both Cup and Liquor of the *Allom*. Because I have dealt with her, as
Æsop

Æsop dealt with the Boy that had eaten the Figs, made her vomit them up again; whosoever is angry with me for doing so, I must bear it. If any of her friends think I do bely her, let them for their satisfaction first answer this Query.

From what cause is it, after you have drunk a Month of it, then, if not before, it takes a Resty, *Jadish fit*, will neither go backward nor forward? A Noble Lord complained to me that the Water dealt thus with him: his Lordship having drunk it with success about a Month, it then swell'd him at stomach two or three last days, and would neither work by Urine nor Stool; though he took his usual Physick with it, as formerly, the Scotch Pill, which is an Extract of Aloes: I advis'd him to take one Dram and half of the pure Essence with the *span* Water; by the help
of

of this, and the said Pill, he had plentiful Evacuations in that Afternoon: thus being quitted of his oppression, he meddled no farther with the Water. This Dr. *Witty* hath carefully observed, and therefore adviseth thus, pag. 211.

If any man finds, that after benefit once had by the Waters, he begins to decline again in his health, as that his appetite or concoction decay, or the Waters pass not so well as formerly, but cause distention, either in the Belly or the Veins, and so bring on a difficulty of breathing, or pain in the head, or the like, it is then time wholly to desist, and to proceed no farther.

This is honestly spoken, but is this the manner of other Waters, when they are fitly suited to a Chronical Distemper, and the Patient find once benefit by them, do they produce in him afterwards
such

such evils as these? or rather, the longer they are drunk till the Cure be wrought, the nearer the Patient is carried to his desired end. Is there not therefore a sting in the tail of *Scarborough-Water*? are not the *Stone-feces* plaistered upon the inner Coat of the Bowels, disturbing their *peristaltick* Motion, and obstructing the *attraction* of the *lacteal* Veins, the cause of all those evils?

This Query thus answered, for further satisfaction proceed after this manner.

First, Take a large quantity of the clear *spaw* Water, in case you fear any Sand may be taken up with it, put all through a Woolen Cloth, boil it till half be consumed, clear off that Liquor, then see how much Sand you find at the bottom; which is nothing else but part of the nitrous

trous Rock, which the Water has dissolv'd, exhale that Liquor lower to the thickness of Oyl, then pour it forth into a wooden Vessel; set it by in the cold, and the *Nitre* and *Allom* settles into *crystals*: when that Liquor will cast forth no more of these, then exhale the liquor dry, put Water to it, and filter it, and you will find more *Stone-Powder* in the Paper; exhale this Water perfectly dry, then burn it in a Crucible, dissolve it with Water, and filter it, there will you have the *blew Clay*; which is nothing else but the *gleeb* of the *Al-lom*: If you please to proceed further, dissolve the first *Crystals*, exhale, and filter, so often till the *Crystals* be pure and white, so will be separated more *sandy Clay*. By all this that I have said and proved to those that will trust their
their

their own eyes, I affirm this as my Position (*viz.*)

*The Nature of Scarbrough Spaw
is petrifying.*

First, I shall prove it by the Authority (which to Dr. Witty is *in-
star omnium*) of Kircher, lib. 8. p. 46. *Queritur quid propriè sit succus lapidificus; dico esse Saxum nitrosum, aquâ eliquatâ*; his whole Chapter, *de Origine Succi petrifici*, doth make manifest this truth, as if it were written with the Sunbeams.

Secondly, by Experiment, I made it visible that the Spaw is mostly nothing else, but the *nitrous* Stone melted in Water, besides the *Allom-stone* that is imbibed in it; There is a famous petrifying Water at the Bridge-end of *Knaishbrough* West-ward, known by the name
of

of *Dropping-well*, a *stillicidium* off a *nitrous* Rock. I sent for a Quart of this Water (which was very clear) and distill'd it in a *Glass Retort*, which gave a Dram, wanting ten Grains) of pure white *Nitre* and *Stone*: by this 'tis observable, that *Scarborough Spaw*, because of the *Allom* juice joined with the *Nitre*, has corroded and imbibed more Stone than this notorious petrifying Water at *Knaishrough*.

I would not be here mis-understood, as if I did from hence infer, that *Scarborough Spaw* is more petrifying than this Water, which will set a stony Crust upon a Loaf, or piece of Wood, after it has lain in it a few hours: this manifest token of petrification *Scarborough Water* is not charged with. The reason of the difference I apprehend to be thus, *viz.* the *alkali* of the *Allom* in *Scarborough Water* hath in part

part imbib'd the acidity of the Nitre, and therefore it cannot so penetrate the Wood put in it, as to leave a crust of Stone upon its superficies, which the other Water having Nitre alone in it will do. That *Allom* is an Alkali Salt, is plain from its saponary property, this the Dyers have experienced: Again, when *Allom* is put in a Crucible over the fire, it burns to a light porous Cinder, *Vacua esse alcalium corpora demonstravit Tachenius*. Nitre on the contrary doth flux in the Fire into a hard compact body, whereby it is evident, that in Nitre the acid hath the predominium, in *Allom* the Alkali; and therefore *Scarborough* Water cannot manifest its petrifying property by putting Wood into it, and crusting it over as the other Water doth: yet he that will affirm, that *Scarborough* Water hath no such occult quality
in

in it, must first prove that it carries no Stone Powder in the Bowels of it; which is manifestly false.

Thirdly, By the *Aporrhæa Spiritus lapidifici*, there are found on the Clift neer the *Spaw*, Muscles, shells, and such like things petrified to a stony substance; one of these was shown to Dr. *Witty*, this year, but he accused the Sea for petrifying it; if so, what befel *Lot's Wife* judiciously, is not so great a miracle, as that it is not our *lot* naturally to be turned into *Pillars of Salt*, that eat so much of *Sea-salt* daily; again, when the Earth of the Clift falleth down by dashes of Rain upon the Sands, as soon as the watery moisture is exhaled from it, it doth petrifie. Dr. *Witty* tells you of a lump of Earth thus petrified that will load two Carts, which because it was of a redish Colour, and hard, he mistook it for Iron.

Fourthly,

Fourthly, by the effects the *Spaw* produceth, primarily in those that are inclinable to the Stone: I wish *Scarborough Spaw* had given me no just occasion to complain of it in this particular; besides what happened to me there, (as I said) I was no sooner come home from thence, but another sharp fit tormented me for two days; that I am not alone in this accusation, may be gathered from Dr. *Witty's* Book; if such complainings as these had not been vulgarly spoken, I suppose, so wise a man as he would not have started this Objection against the *Spaw*, pag. 150. Another (says he) never had a fit of the Stone till drinking of these Waters, though few of his Family have escaped that Disease: is not this a shrewd sign of its petrifying nature? his Parenthesis doth not invalidate it, for, *multæ sunt in potentia, quæ nunquam reducuntur in actum*;

C

actum; but take his answer to this Objection; *Even just so a Light is brought into a dark Room, by which a Thief is discovered, therefore Light is ill for a Thief; by the same consequence that Scarbrough Spaw is ill for the Stone.* An Objection of this weight must not be answered slightly, we that have been afflicted with this Distemper cannot be affected with ginglings when they tend to our mischief: But to answer, The Thief is in the *Spaw*, the Water was not such a dark Room where the Thief has lain hid so long, but if a Light had been brought in by a Chymist, this Thief might have been discovered before this time, and then *Nephritic* men would have been aware of it. I grant, by reason of abundance of *Nitre* in the Water, it will force out stony Gravel in the Kidneys, when any is there; but I am
 cer

certain also because, of the plenty of *Stone filings* that are in it, the Water will occasion the *breeding* of Stones in the Kidneys, where, *pro tempore*, there are none; ask those that have quitted themselves of the Stones they voided by drinking the Water, if after they returned home, fits have not come on them more frequently and sharply than before they drank of *Scarborough-spaw*. I protest to the world, both as to my self, Relations, and Patients, I have found it so: to shew the difference betwixt *Scarborough* and *Knaishorough* Water (as to this petrifying property) I shall mention a remarkable Observation of *Mr. Henry Proctor* of *Farnly*, I had the relation of it from his own mouth when we were together; this Gentleman was brought very low in an *Hedick* Fever, and sadly troubled with shortness of breath,

he consulted with Dr. Henry Poole for Cure, but found no Remedy; he then applied himself to Dr. Neale who prepared his body, and advised him to drink *Knaisbrough Water*, which caused him cough up *several Stones* daily till he was perfectly cured. He does enjoy his health very well ever since, using those Waters once a year; afterwards he married, and now is Father of two Children; if this Patient had been sent to *Scarborough Spa*, what had become of him let others judge; as the Disease of the Stone doth immediately proceed from a *petrifick Spirit*, the cause *sine quâ non*, so *Jaundise* and the *Gout* have their *arise* from it, hence it doth follow, that, *secondarily* these two *Distempers* are dangerously *exalted* (in bodies that are inclinable to them) by drinking this *Spa*: for evidence of this

truth

truth, I shall give instances: First, the Lord *Erwin* went from his House at *Temple-Newsam* to *Scarborough* (upon what other account than to divert himself there with the company of his friends, I know not) after he had drunk the Water, and was returned home, presently the *Jaundise* seizes on him, of which Disease he shortly died, though Dr. *Taylor* used all means for his remedy; now this I say, all *sweet Spaws* in the World have a property common to them, that they are of a *deopilating* nature, and though they may not suit to every Disease, yet for the removing of grand *Obstructions* (the cause of most Diseases) they are generally the *best*, and mostly the *last* advice of all *Physicians*; what reason then can be given why this Honourable Lord by drinking *Scarborough Spaw Water* had not the *Obstructions* of

his Gall opened, but contrarily brought into this irrecoverable Disease that kill'd him? I say what reason else, if not this, *Scarborough Water* did petrifie that *Sulphurous saline* humour in the *Vesica biliaris* into Stones, too great to pass through the *porus*? Dr. *Witt* blamed his too liberal drinking of wine with it (as he said to my self this year) but what harm could that do more than to increase *Choler*, which humour unpetrified is most easily purged away of all others? That Stones do as usually concrete in the *Gall*, as in the *Kidneys*, in men as well as in beasts who doth question? I was present many years since at a *Physick Lecture* in *London*, when the Professor in the Discourse of the *Jaundice* brought forth three or four little *Stones of Gall* wrapt up in his Handkerchif, to shew them to the other

Doctor

Doctors there, relating that a *Gentlewoman* of the *City* afflicted with that Disease, after many fruitless attempts made by him for her Cure, at last was put to it to give her a Dose of sharp working Physick, which quitted her of those Stones, whereby she forthwith recovered : if any object, that suppose the *Gall* be petrified, yet it cannot cause death in so short a time as this Lord took his Disease, and died in it.

For answer, let him consult *Helmont* with *Syboius*, and there is enough to satisfy him, that the *second fermentation* made by the *succus pancreaticus*, and the *Gall*, are as necessary for the preservation of life, as the *first fermentation* is, that's in the *Stomack*; though in an Oxe Gall there is often found a great Stone, notwithstanding the beast keeps health and liking till the Butcher slaughter him, yet

then there is abundance of liquid choler besides in his *Vesica biliaria*, sufficient to perform *fermentation* ; I shall mention but two other instances of this year in our Town. An *Alderman* whose Father some years since died of the *Jaundice*, but himself was never troubled with it, till after his coming from *Scarborough Water*, then did the *symptoms* of this Disease appear, only it did not manifest it self either by *Urine*, or by *Colour* of his body, which gave me a great cause of suspicion that the water had petrified the *Gall* ; with *Chalibeat*, and other *Icteric* drinks, by slow degrees he recovered.

A *Merchant's Wife* with Child, for company of her Husband, came to *Scarborough* : Dr. *Witty* in his Book approving the Water safe for such, she desired to drink of it, upon her return home, a tormenting pain

pain seized on her right side, for mitigation of this extream dolour, and prevention of a Fever, *Phlebotomy* was thrice ordered, then an *Antimonial Vomit*, yet so obdurate was the Gall, by the petrifying property of *Scar-brough Water*, as I suspected, that none other sign appeared of the *Jaundice*, but a return of her pain three or four times over, at length a ternary spirit of *Wine*, *Nitre*, and *Mercury elixerated* dissolved the congealed *Choler*, and then did the Disease shine forth in its *saffron* colour; after *three recidivations* she was pluckt out of the Jaws of death, beyond the hopes of all her friends, and is now well delivered of a *lusty Boy*: Let it be here observed that I practise according to conscience, and let those She-Tatlers, who when they have done mumbling over their Beads, come
to

to a Feast, and there mutter hard
speeches against me for dealing so
severely with this Patient, take
notice that it is my principle, when
I see my duty, to pursue it to the
hazard of my *credit* with such as
them: and though I be singular in
this point from the most of my Bre-
thren, whose wisdom it is to secure
themselves from an evil report, by
doing *nothing* in a *doubtful* case;
yet I have not so *learned* Christ.
The Maxim is true, *quod unicum*
est, non deliberandum est, and the
resolution is Christian, *Let us quit*
our selves like men of Art and Inte-
grity, and let the Lord do what seem-
eth him good. Pardon this digressi-
on, Reader.

Dr. Witty gives an instance, pag.
180. of a Knight and his Lady in
Lincolnshire, by drinking the Wa-
ter at home for the *Scurvy*, both of
them took the *Jaundice*, which
they

they recovered not from, till *Christmas* following; he blames the distance of place from the Fountain for this fault of the Water; but all that can be charged upon drinking at a distance, is, that it may diminish the good, and increase the bad qualities of the Water which are innate.

The Gouts inveterate malice is known to arise from a *petrifying* property of its *acid spirit*, hence 'tis said, *Tollere nodosam, nescit medicina podagram*. If losers may have leave to speak, I shall mention how *Scarborough* water dealt with me as to this Distemper, which all my life long I never felt the least touch on before: no sooner was an usual Stone slipped into the Bladder, from the left Kidney (of which I have spoke) but immediately *ictu oculi*, a Thunder-bolt from the right Kidney darted into the

the

the joint of the great Toe, which caused me to go limping a fortnight after : Thus have my Reins tryed what is that water of *Scarborough*. That I am not alone neither in this accusation, hear Dr. *Witty*, pag. 149. Others drinking without due preparation as was necessary (peradventure to save some petty charge) have fallen into the Gout, the water contracting heat for want of speedy passage, being thrown by nature upon the weak Joints, have hence inferred that these Waters cause the Gout. Answer, These Gentle men without peradventure may be supposed to have neglected that which is judged necessary for them to do before they drink Water, yet I do aver, no *spaw* in the world has less need of preparatives, and more need of Purgers than this of *Scarborough*: it was never observed by me, that any at the first morning

ing draught of this Water, wanted a speedy passage by the back door. Though I cannot approve of his Notion touching the *διότι*, how and wherefore the water causeth the Gout, yet in the *ἔτι*, that it does so in Bodies inclinable to that Disease, we are both agreed. Thus having proved by all manner of Arguments both *à priori* and *à posteriori*, that *Scarborough* water is petrifying, and have manifested that *Knaisbrough Spaw* (which partakes of the Vitriol of Iron) by a famous Instance is quite otherwise; it now remains, only that I make out *Scarborough* water has no Vitrioline Spirit in it. In this undertaking, I shall approve my self a greater friend to *Scarborough* than *Dr. Witty*, who maintains the contrary, for if in this water the *esurine* Spirit of *Vitriol* be joined with the *Volatile* Spirit of *Nitre*, of
which

which this *Spaw* doth chiefly partake; how then doth it differ from *Aqua Fortis*, that deadly *corrosive* water, which is nothing else, but these two *acid spirits* inseparably united together? if he say these two are not all, there is *Allomane* Salt also, this makes the Water worse, for a Spirit from all these will make an *Aqua Regia*, which doth corrode *Gold* it self, the hardest of all Metals to dissolve. If it be said these *corrosive* Spirits are extorted by stress of fire from their bodies, which extraordinary heat will not be granted to be in the bowels of the Earth. I answer, this possibly may excuse *à tanto*, but not *à toto*: for first, the prolifick Seminals of all things generated in the Earth, doth come to their proper *matrixes* in a vapour. If any question this, let him try *Platt's* Experiment, put *bituminous* and combustible

buſtible ſubſtances into two Glaſs *Retorts*, filling their necks, the one with *lean Earth*, the other with *peet-earth*, ſet them in an open *fire*, and by gradual heat the Vapours that aſcend will *petriſie*, the one Earth into *Stone*, and the other Earth into a *plain coal*. Secondly, this Vapour, if it be of ill quality, hath the ſame pernicious *effects* upon our bodies, as thoſe that are *ſublimed* by *Art* in the *fire*. This truth the Miners do ſadly experience, the *Sulphurous* Vapours that are in every *Coal-pit*, will ſoon *ſtiſle* any that goes into it before it be purged by air conveyed to it. Thirdly, this Vapour Nature can no more cauſe to aſcend upward (which it doth perpetually) without heat, than *Art* can *ſublime* without *fire*. *Suppono* (ſays *Kircher*) *omnes vapores nihil aliud quàm tenuiſſima, ſubtiliſſima ac*
in-

insensibilia corpuscula esse, quæ calore exaltata ingentis in terreno mundo mutationis causa sunt.

Wherefore, I say, though we know that *Nitre* and *Vitriol* distill'd *divisim*, are both of them severally good, and of daily practice; yet we experience also, that distill'd *conjunctim*, they send forth the most deadly *corrosive Vapour*, which by the coldness of the Receiver is condensed to a Spirit; there can be no doubt, but if both these (as *Dr. Witty* would have it) be joined in *Scarborough* water, it must be highly corrosive, though not to such a degree as *Aqua Fortis* is, twenty drops whereof will kill a Cat; notwithstanding I shall examine his proofs for this *Vitriol* of Iron, as I find them in his Book, pag. 9. he says, a small quantity of Gall being put into the *Spaw Water*, doth turn it into a dark *Claret Colour*,
ergo,

ergo, there is *Vitriol* in it; this is a
non sequitur, for thus will the Gall
turn a Coal-water, if it has gotten
any touch of the *Spirit of Sulphur*
to sharpen it, for dissolution of the
black Mine that it passeth through:
but we will suppose there is no
Coal-Mine about *Scarborough*, there-
fore, I say, it is only the *Allom-*
Stone in the *Spaw* that gives the
tincture by the Gall; let experience
prove it, take any *Allom-stone un-*
burnt, powder it, adde Spring-wa-
ter sharpened with the Spirit of *Ni-*
tre that it may dissolve it, and fil-
ter it, so will you have (to appea-
rance) a water as clear as the *Spaw*,
put Powder of Gall thereto, and
it gives you the same *tincture*. I am
witness that the *Chymical Apothecary*
of *York*, did pick out of the
Hill near the *Spaw*, an *Allom-stone*
that was not hardened in the air,
but made soft in the *Nitre* which
abounds

abounds there, and after he mixed only Spring water with it, and added the Gall to it, it gave a high a *Claret colour*, as the *Spaw* self doth.

The Reason of these Experiments is plainly thus; the *acid* water dissolves the black *Coal*, or the *blew Stone*, and hides the colour of them in its pores, because every Atome of the *continens* must be outward to the *contentum*. The Gall being put in and stirred amongst it, by its *Alcaly* imbibing the *acidity* of the water, what is included therein is *extruded* towards the bottom, where, what precipitated appears in its own colour, the Spirit of *Salts* adding lustre thereto.

I will not mention here, how Dr. *Witty* commends this black sediment for Physical use, pag. 100. Against this Experiment of *Allo-*
Stone

Stone giving its tincture by the Gall, let be observed how Dr. *Wit-* ty mistakes in his tryals; says he in his answer to Mr. *Simpson*, pag. 91.

I have tryed the Allom Mine, having broken it to powder, and infused it in Spring water some hours, and it received no tincture from the Gall.

Good reason, for he did but *infuse* it, not *dissolve* it; can it be expected that the Gall should precipitate the Allom Stone from the water, whilst it came not into it, but only lay at the bottom undissolv'd? what can simple water extract out of a hard Slate? no more than a Feather can strike fire out of a Flint Stone: Nay more (saith he) *I calcin'd that very Stone, and then dissolved it in Spring water, and yet it received no tincture from the Gall.* Answer. No marvel neither, because the calcin'd Stone of Allom is white; its blewness, which

gives the *tincture*, disappears by the fire; even as *red Coral* calcin'd in a Crucible turns white of Colour. Further, to let the Reader know that he will spare for no pains to give satisfaction, *pag. 92.* he sends two ingenious Gentlemen at Whitby where is a water that breaks out the middle of a Mine, to try if they would receive *tincture* from Gall, as they did both assure him it did not; besides they sent a Glass-bottle of the same water to York, where he try'd it himself, and it did not change at all. Why? what's the matter? It is answered out of his own mouth Nay, saith he, *I do aver with thee that it is like ordinary Spring-water* (in truth it is none other, the Labourers drink of it, to quench their thirst) *having taken no vapour, odour or Savour from the Mine*; yet he doth confidently conclude from this tryal that it is not from *Allo-*
the

that this Water at *Scarborough* takes its tincture. Such another Errand as this to *Whitby*, he makes to *Barnsley* upon the edge of *Darby-shire*, to try if a Spring of fresh Water that runs out of *Iron-stone*, would change colour with Gall: and it did not, neither there, nor at *Tork*. What can be inferred from hence, but that this Water which ran from the *Iron-stone* was no more concerned with the Iron, than that at *Whitby* was with the Allom; nay, *à potiori*, if a Mineral Salt of Allom whiles crude, and imbodyed in its Gleebe, doth not always impart to the Spring that runs through it, either Odour, Sapour, or Vapour, as he hath said before, much less will the Metal of *Iron-stone* do it. If his friend that for a further tryal made a hole in the bottom Stone, to see if the Water that stood in it would tinge by Gall,

had sent him a Bottle of any Water that came from the Iron-stone whilst it was in *solutis principijs*. I do affirm that Water would receive tincture from Gall; such a Water we have at *Hunwick*, where a great quantity of Iron-stone is digged up, and it receives tincture from Gall as highly as *Scarbrong* doth. Dr. *Witty*, pag. 94. is framing an Argument *ab inductione* thus: The tincture by Gall is not from *Allom*, nor from *Iron*, ergo, 'tis from *Vitriol*: Answer, I am loth to see my Brother in the pincfold, yet must I say, if it be from the *Vitriol*, it is because of the *Iron* that is in it, for no other *Vitriol* but *ferrugineum* will do it: hence it will follow, if not from *Iron*, then 'tis not from *Vitriol*, ergo, 'tis from *Allom* that *Scarbrong* Water tinges by Gall.

His second proof, pag. 11.

Sir *John Anderton* observed that the

the Water carried in an Oaken Vessel, in the bottom whereof was found a *yellowish* sediment, which he sent to the Doctor, he saw it like *crocus Martis*, and tasted it of a *stiptick* quality, and therefore 'tis supposed by him to be the *Chalybeate* part of the Minerals. Answer, *Quæcunq; volumus, facile credimus.* The sharp Water agitated against the Oaken Vessel, in carrying *corrodes* the inner parts of it, which powder settling to the bottom, with some *feces* of the *spaw* Water produceth a settlement of the colour of Oak, which if he had dried, and then burnt in a Crucible, the flame thereof would have shown him, that it was *Wood* and not *Iron*. If different things were not sometimes like one another, none could be deceived. Pag. 12. *The water at 40 Miles distance will not cruddle Milk as it doth at Scarbrough, and*

that it doth not receive such a deep tincture from the Gall, nor is it found to have such a pleasant acidity as at the Fountain: which certainly must proceed from a loss of the Vitrioline Spirits, of which it doth eminently participate. Answer, Who questions that Allom will not cruddle Milk as well as Vitriol? the more subtile any acid Liquor put to Milk is, the more perfectly doth it separate the thick parts from the thin; 'twill follow therefore that the water hath lost some of its subtile Spirits, by carrying, but none of the Vitriol which it never had. The tincture from the Gall I have manifested to proceed from the Unburnt Allom Stone, whereof this is a plain proof; put the *spaw* Water into Glas Bottles at the Fountain, let them be carried abroad and left a few days, and the Allom Stone will settle of it self without any mixture

mixture of Gall, to the bottom, in a blackish Powder, which cannot be any thing of *Chalybs*, for two Reasons; First, because the *Vitrioline* Spirit, and Iron are too great friends (being once met together) to be so easily separated, Any that have prepared *Vitriolum Martis*, he hath learned this Note by it. Secondly, when the *Vitrioline* Water doth settle its Colcothar without adding Gall to it, it is always of a yellow Colour. This may be seen in the Stone Bason and Spout of *Knaisbrough Spaw*, where the Water passing continually in the open air over it, hath precipitated *Crocus Martis*, as I may call it thereupon. The like may be observed in every runner near the Fountain head of any *Vitrioline* or *Chalybeate* water whatsoever. His Argument for Iron, pag. 14. *The Earth that falls from the Bank*

Bank turns to Iron-stone, as hard as Iron it self, and fusible being put into a Smiths Forge, as I have sometimes found upon tryal: There is a piece of the Cliff within one hundred paces of the Spaw, thus converted in a very few years to an Iron Stone, as much as would load three or four Carts: Answer, I here require the Smith to make Horse-shoe Nails of it, and then I shall yield to Dr. Witty, thus much, that within a hundred Paces of the Spaw Westward there is Iron-stone. To me it doth appear to be a reddish Earth dissolved with the Nitroaluminous Salt, and petrified in the Sun and Air to a hard lump, which will flux in the Fire, answerable to the Nature of that Salt that is in it. Another Argument for Iron (which for manners sake I leave last) is that the Water colours the Excrements black: he should have said blew, for when

when he looks back again, they will appear of the same colour that Allom Stone is of. In his Answer to Mr. *Simpson*, pag. 42. *I knew* (saith he) *Vitriol to be in the water from its eminent acidity.* Answer. This is a *non sequitur*, for acidity is appropriated to the Spirit of Nitre, as well as to the Spirit of Vitriol. Pag. 43. Another token of Vitriol is, *that Vitrioline vapour which any one of an indifferent smell may observe, which is something likely of Ink, though more pure.* Answer. Take this Experiment to know what smell *Scarborough Spaw* is of, (*viz.*) Take oily Water (after all the Christsals are settled from it mentioned before) exhaled perfectly dry; adde hot water to it, then stir it, and if it do not stink as bad, or worse than the Allom-pans at *Whitby*, I will forfeit my Nose: why then says Dr. *Witty* 'tis a more
pure

pure smell than that of Ink. *Dulcis odor lucri ex re quâlibet.* Pag. 44. Six score paces from the Spring a Vitrioline Salt, of a dark yellow colour, sweats out of the Cliff. Answer. The Nitre spires out of the Cliff all along Westward from the Spaw, of a white Colour, this he confesseth to be none other than Nitre; at a further distance it changeth Colour to a dark yellow, as the Earth doth out of which it sweats: Let him hear Kircher confirming this truth, *Capite de nitro; Quod si subindè nitrum variis coloribus imbutum reperiatur, id nil tamèn diversum à nitro, arguit cùm omnem colorem à colore terræ ex qua extractum fuit, trahat, si ex rubro, rubrum; si ab albo, album, & sic de cæteris,* pag. 304. l. 6. Page 67. The black sediment precipitated by the Gall, I Calcin'd (says Dr. Witty) and it became of a dark brown colour,

low, and is none other than Scoria of Iron (he calcin'd likewise the whole Body of Minerals) and there are in it here and there flakes of Iron, broad and thin, like those that flie off from the Smiths hammer. Answer. This calcin'd Sediment, and calcin'd Body are all one Experiment; for the Gall precipitates the gross parts whatsoever they be: no marvel then if it became as hard as a Cinder, which had so much Stone in it as I have proved; for those flakes of Iron that are discovered in the Body of Minerals, I confess I am not so ingenious, ^{as he} I never yet undertook *his* method in searching what different parts were in this compound. Water, to calcine the whole Body of Minerals together, as that only expedient way; yet I calcin'd the Stone Powder, where most likely it should be intermixed, and there they are not. I calcin'd also the
 Clay

Clay, neither are any *Iron flakes* there, wherefore it must be supposed, like as he *smelt* the *Vitriol*, so he *saw* the *Iron flakes*, *id est*, something like them.

The right improvement of this Water consists in three indications.

First to resist (if it were possible) the petrifying property ; but this being to the Water *proprium quarto nodo*, small help can be had against it.

Secondly , To hinder that the *stone Powder*, and *feces* of the *Al-lom* fix not in the Bowels.

Thirdly, To prevent in tender constitutions that the duplicated Salt corrode not the Entrails, causing thereby a *Dysentery* , which (says *Dr. Witty*, pag. 150.) rarely happens.

All the harm that *Scarborough* water is guilty of, proceeds from one of these causes.

In

In his Answer to Mr. Simpson, I read thus, pag. 238. *And though Mr. Simpson has design'd causlessly to rob me of the honour and reputation (if there be any in it) of my discovery of Scarbrough Spaw, with its usefulness to my Country, yet if he have any thing to make out in point of Art, I shall never go about to eclipse it, but thank him to boot.*

As he is a man of his word, I expect thus much from him.

F I N I S.

Handwritten text in a cursive script, likely a letter or a page from a manuscript. The text is mostly illegible due to fading and blurring. It appears to be organized into several lines of prose.



Small handwritten text or a signature located below the horizontal line.

Fragment of text from the adjacent page, visible on the right edge. It includes several lines of handwritten text, some of which are partially cut off.



Say, wise *Mythologist*, whence did it
rise,

That Cocks were *Æsculapius* sacrifice?
Was't that his genuine Sons might only
claim

Right to the Pit, and be Cocks of the
Game:

And fight for victory they car'd not
how,

So Laurel might adorn their curled
brow?

Then let'm take't. Here's one, whose
wit's too brave

To be employ'd in calling Fool and
Knave:

Who would the ancient, well-stuff'd Li-
brary

Might help, but not despise, the Lab'ra-
tory.

Hippocrates and *Galen* he would have
Friendly lye down with *Helmont* in the
grave:

And this the other, hand or eye to lend
That both might surely walk to truth,
their end.

*

What

What bred the quarrel? * al- * *Pro aris*
tars? household gods? & *focis.*

No, water only 'tis that makes the oddes
And must these Wells be nam'd * *Gen. 26*
as * those of old, 20, 21.

Esek and *Sitnah*? No. Reader, behold
Here's one, who digs again, that strifers
may cease;

And * *Rehoboth* may note both *Ver. 22*
room and peace,

Yet not another Well; but other Veins
He cuts, that thou may'st see what hid
remains:

And Nature in her naked posture lays,
That each true quality may wear its
bays.

Thus *Knaresburgh's* Vitriol doth bear the
bells.

Scarborow's Nitre most of all excels.

Nor can the Universe her power show
In any Spaw like this. Others are slow,
And need preparatives: Th' first morn-
ings draught

Of this will find a speedy passage out.

Yet drunk a month, a Jadish, resty fit

It takes with many, and can neither
hit

For-

Forwards nor backwards, till it shews the
ground

Of Gout and Stones in Kidneys, which
are found

(Bred by its petrifying quality)

And in their Bodies many months do lye.

Knaresborow Stones in Kidneys breaks,
and doth

To Urine stop'd give vent. It purgeth
both

By Siege and Urine, the whole mass of
blood.

What hurts, it sweeps away ; keeps what
is good ;

Opens Obstructions of all kinds, and so

Cools all th' interior parts. What dos't
not do ?

He then, who gives to each its proper
due,

These Fountains * heals, and * *Medice*
their Physicians too. *cura, &c.*

He shall be *Æsculapius* heir, and when

Physicians passions do declare them men,

If th' Universal Vogue shall deifie

Him, as the true Peace-maker, so will I.

Amidst the press of Books, wherewith
our Age

Is over-press'd, appears upon the stage

* 2

This

This little Combatant, who by his stature
You'l judge too Juvenile to find what na-
ture
(Whilst she at bo-peep plays in secret
skulks
As't were in sport) has hid from greater
bulks.
But weigh his parts, his sinuous reason
scan,
And 'twill appear the stripling is a man ;
At least a child upon a Gyants shoulder,
And by his further Prospect is the bolder.
The Father is a grave experienc'd Don ;
And 'cause 'tis fit some Page attend his
Son,
This rural one though with unimble
feet
Runs at his stirrup, and esteems it meet,
In's Master's name, to ask the reason why
The quenching Element should ignifie
Mens minds and pens, that thus our wa-
ters are
Turn'd Meriba's, bout'fens of paper war.
Has sooty Vulcan so his shop enlarg'd,
That English springs are with his fumes
surcharg'd ?
Has ludicrous *Leviathan* forsook
His larger bed, and a new fancy took

In

In lesser Fontanels with men to play,
That they by choler must their hegmon
bewray?

Enter *Pacificus* and set them right :
Make the third man, and terminate the
fight.

For who so likely to cement the breach,
As he whose view to both extrems doth
reach?

While in the golden medium he corrects
Their oblique Sallies, and what's right
protects,

He sticks not in occults, but marches on,
Cuts through the Alps by demonstration :
And sith the fascinating Hag did burn
His toes, blame not if cholerick he turn,
And burn the Water-witch, till she dis-
close

Her sordid feces---- And he thought to
pose

Those Interlopers, Publicans of Trade,
Disliking that *Matthew* should *Luke* in-
vade;

That o're-grown Parsons should *Vespasi-
ans* be,

And do esteem no gain unfavory :

There-

Therefore from *Moses* chair to stools will
run

And Urinals--- But more of that anon.
Mean time go on (*sans* sting) thou little
Bee,

(If they'l reclaim without it, we shall see
Be confident, how e're thou find the
rabble,

To Learned Gusts thou shalt be accepta-
ble.

To Reasons taste 'twill be a dainty bit
When eating Time has made an end of
IT.

F I N I S.

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